Parisharam (2024)

Relations and Functions

DPP-04

1. Domain of the function $\frac{1}{\sqrt{x^2-1}}$ is:

(1) $(-\infty,-1)\cup(1,\infty)$

(2) $(-\infty,-1]\cup(1,\infty)$

(3) $(-\infty,-1)\cup[1,\infty)$

(4) None of these

2. The domain of the function $f(x)=\frac{1}{\sqrt{|x|-x}}$ is:

(1) R^+ (2) R^-

(3) R_0 (4) R

3. The domain of the function $f(x)=\sqrt{(2-2x-x^2)}$ is:

(1) $-3\le x\le\sqrt{3}$

(2) $-1-\sqrt{3}\le x\le-1+\sqrt{3}$

(3) $-2\le x\le 2$

(4) None of these

4. If the domain of function $f(x)=x^2-6x+7$ is $(-\infty,\infty)$, then the range of function is:

(1) $(-\infty,\infty)$ (2) $[-2,\infty)$

(3) $(-2,3)$ (4) $(-\infty,-2)$

5. The range of $f(x)=\cos x-\sin x,$ is:

(1) $(-1,1)$ (2) $[-1,1)$

(3) $\left[-\frac{\pi}{2},\frac{\pi}{2}\right]$ (4) $[-\sqrt{2},\sqrt{2}]$

6. The range of $\frac{1+x^2}{x^2}$ is:

(1) $(0,1)$ (2) $(1,\infty)$

(3) [0, 1] (4) $[1,\infty)$

7. Find the range of the real function $f(x)=\frac{x+1}{x-3}$

(1) R – {3} (2) R – {1}

(3) R (4) R – {–3}

8. The range of the function $f(x)=\frac{x+2}{|x+2|}$ is:

(1) {0, 1} (2) {– 1, 1}

(3) R (4) $R-\{-2\}$

9. Find the range of the function, $f(x)=|x+3|-2$, when $x\in R$

(1) R (2) R – {–3}

(3) [–2, ∞) (4) None of these

10. Range of $f(x)=\frac{3}{2-x^2}$ is:

(1) $\left(-\infty,\frac{3}{2}\right]$

(2) $(-\infty,0)\cup\left[\frac{3}{2},\infty\right)$

(3) $(-\infty,0]\cup\left[\frac{3}{2},\infty\right)$

(4) $\left(\infty,\frac{3}{2}\right]$

Note: Kindly find the Video Solution of DPPs Questions in the DPPs Section.

Answer Key

1.	**(1)**	**6.**	**(2)**
2.	**(2)**	**7.**	**(2)**
3.	**(2)**	**8.**	**(2)**
4.	**(2)**	**9.**	**(3)**
5.	**(4)**	**10.**	**(2)**

PW Web/App - https://smart.link/7wwosivoicgd4

Library- https://smart.link/sdfez8ejd80if